

## Modeling Clay Activity: Sedimentary Features, Erosion and Weathering

**Directions:** Students are to use modeling clay to construct a 3D representation of a particular feature. When complete, students should take a picture of it and include it in their report. In the report, students should discuss where it is, its dimensions, how it was formed, and how it's used, for example as a place of eco-tourism.

### Equipment Needed:

Internet (to do research on a particular sedimentary feature, and get images for your model)

Molding Clay (5 colors)

Digital Camera (to document stages of construction)

Google Earth (to look at satellite images of sedimentary structure) \* optional

**Research:** Students should first spend some time choosing a particular sedimentary feature (see list), researching information about its geology and if it's used today as a place of tourism or recreation. Students should jot down important information they find and be prepared to discuss it in class, if called upon, using their model as an example.

### Acceptable Sedimentary and Erosional Landforms:

- |           |             |
|-----------|-------------|
| • Arch    | • Inselberg |
| • Badland | • Mesa      |
| • Canyon  | • Sea Arch  |
| • Butte   | • Sea Stack |
| • Hoodoo  |             |

### Specific Locations to Consider:

- Delicate Arch in Arches National Park, Utah
- Es Pontas Arch off the coast of Mallorca, Spain
- Hoodoos Amphitheater at Bryce Canyon National Park, Utah
- Badlands National Park in South Dakota
- Putangirua Pinnacles in New Zealand
- Section of the Grand Canyon in Arizona
- Section of Kings Canyon in the Northern Territory of Australia
- Ayers Rock in Australia
- The Wave in Coyote Buttes in Paria Canyon, Vermillion Cliffs Wilderness
- Buttes in the Painted Desert in Arizona

**Model:** The model should be constructed in cross section, so that the observer can see what activity is going on above ground and below the surface. Because the molding clay comes in different colors, the students should provide a key. The student may do this by making labels and attaching them to the model with pins or by creating a colored key on paper and putting it with the model.

**Class Time Allotted:** 1 period

**Deliverable:** Students are to upload their information onto a PowerPoint slide (picture and talking points) and post it to the school's class management system (First Class). In their presentation, students should be able to 1) point out the location and type of feature (1 point) 2) describe the general geologic activity taking place (2 points), 3) identify specific geological aspects of the feature from their online research (2 points). **Total Points:** 15 points